

REMARKS

In the Office Action, the Examiner rejected claims 1-10 and 33-43. By this Response, Applicant hereby amends claims 1, 5, 6, 7, 9, 11, 26, 27, 29, 30, 33, 38, 39, 42, 43, 45, and 46, cancels claims 10, 18, 34, 36, 40, 41, and 44, and adds new claims 47-58. These amendments do not add new matter. In view of the foregoing amendments and following remarks, Applicant respectfully requests allowance of all pending claims.

Interview Summary

On August 9, 2006, the Examiner and Applicant's representative, Tait R. Swanson (Reg. No. 48,226), held a telephonic interview to discuss the claims and outstanding rejections. During this interview, the Applicant's representative pointed out support for the previous claim amendments, e.g., subsequently return heat to the welding implement, with reference to page 6, lines 4-10 of the present application. The Applicant's representative and the Examiner also discussed various amendments to expedite allowance of the present application. For example, the Examiner suggested amending the independent claims to recite an insulating material about the thermal storage member and/or an electrical insulator inside the thermal storage member as shown in FIG. 3 of the present application. Based on this teleconference, the Applicant's representative agreed to amend the independent claims 1, 11, 26, 27, 29, 33, and 45 to recite these features to expedite allowance of the present application.

In view of this interview summary, and specifically the amendments suggested by the Examiner, the Applicant submits that independent claims 1, 11, 26, 27, 29, 33, and 45 and their respective dependent claims are now in condition for allowance.

Claim Rejections under 35 U.S.C. § 112, First Paragraph

The Examiner rejected claims 1-10 and 33-46 under 35 U.S.C. § 112, First Paragraph for allegedly failing to comply with the written description requirement. The Applicant respectfully traverses this rejection.

Legal Precedent and Guidelines

Regarding the written description requirement, the initial burden of proof regarding the sufficiency of the written description falls on the Examiner. Accordingly, the Examiner must present evidence or reasons why persons skilled in the art would not recognize a description of the claimed subject matter in the applicant's disclosure. *In re Wertheim*, 541 F.2d 257, 262, 191 U.S.P.Q. 90, 96 (C.C.P.A. 1976). The Examiner is also reminded that the written description requirement does not require the claims to recite the same terminology used in the disclosure. The patentee may be his own lexicographer. *Ellipse Corp. v. Ford Motor Co.*, 171 U.S.P.Q. 513 (7th Cir. 1971), *aff'd*. 613 F.2d 775 (7th Cir. 1979), *cert. denied*, 446 U.S. 939 (1980). Moreover, any information contained in any part of the application as filed, including the specification, claims and drawings, may be added to other portions of the application without introducing new matter. Accordingly, if an application as originally filed contains a claim disclosing material not disclosed in the remainder of the specification, the applicant may amend the specification to include the claimed subject matter. *In re Benno*, 768 F.2d 1340, 226 U.S.P.Q. 683 (Fed. Cir. 1985).

Deficiencies of Rejection

In the Office Action, the Examiner specifically stated: "The new amendment, 'and subsequently return the heat to the welding implement' is new matter, since this feature was never describe in the specification." Office Action mailed on June 26, 2006, page 2. As discussed above in the interview summary, the Applicant stresses that the foregoing claim feature is clearly supported in the original specification, for example, at page 6, lines 4-10. The specification discloses:

Torch 34 also comprises a thermal storage member 76 that is adapted to take advantage of the duty cycle of the system 10 to cool the torch 34. The thermal storage member 76 is adapted to cool the torch head 70 during operation of the torch 34 by storing heat transferred from the torch head 70 via the speed channel 72. The thermal storage member 76 then releases

the heat to the speed channel 72 when power to the torch head 70 is removed. The heat is transferred from the speed channel 72 to the air via the power cable 24 and the torch head 70. Specification, page 6, lines 4-10.

Clearly, the specification discloses storing heat in the thermal storage member, and then subsequently returning the heat to the speed channel based on the duty cycle during operation of the torch. Thus, the previous amendments do not present new matter, and are fully supported by the original specification. Despite this support, the Applicant hereby amends at least some of these claims to remove the foregoing feature to expedite allowance of the present application. For at least these reasons, among others, the Applicant respectfully requests withdrawal of the rejections under Section 112, First Paragraph.

Claim Rejections under 35 U.S.C. § 112, Second Paragraph

The Examiner rejected claims 1-10 and 33-46 under 35 U.S.C. § 112, First Paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention. The Applicant respectfully traverses this rejection.

Legal Precedent and Guidelines

The examiner's focus during examination of claims for compliance with the requirement for definiteness of 35 U.S.C. 112, second paragraph, is whether the claim meets the threshold requirements of clarity and precision, not whether more suitable language or modes of expression are available. *See* M.P.E.P. § 2173.02. Although the Examiner may take exception to the terms used in the claims, the patentee may be his own lexicographer. *Ellipse Corp. v. Ford Motor Co.*, 171 U.S.P.Q. 513 (7th Cir. 1971), *aff'd*, 613 F.2d 775 (7th Cir. 1979), *cert. denied*, 446 U.S. 939 (1980). The Applicant may use functional language, alternative expressions, negative limitations, or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought. *See* M.P.E.P. §§ 2173.01 and 2173.05; *In re Swinehart*, 439

F.2d 10, 160 U.S.P.Q. 226, (CCPA 1971). The Examiner is also reminded not to equate breadth of a claim with indefiniteness. *In re Miller*, 441 F.2d 689, 169 U.S.P.Q. 597 (CCPA 1971).

The essential inquiry pertaining to the definiteness requirement is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. *See* M.P.E.P. § 2173.02. As set forth in Section 2173 of the Manual of Patent Examining Procedure, definiteness of claim language must be analyzed, not in a vacuum, but in light of:

- (A) The content of the particular application disclosure;
- (B) The teachings of the prior art; and
- (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

In reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. 112, second paragraph, by providing clear warning to others as to what constitutes infringement of the patent. *See Solomon v. Kimberly-Clark Corp.*, 216 F.3d 1372, 1379, 55 U.S.P.Q.2d 1279, 1283 (Fed. Cir. 2000). Only when a claim remains insolubly ambiguous without a discernible meaning after all reasonable attempts at construction must a court declare it indefinite. *See Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1366, 71 U.S.P.Q.2d 1081, 1089 (Fed. Cir. 2004). Accordingly, a claim term that is not used or defined in the specification is not indefinite if the meaning of the claim term is discernible. *See Bancorp Services, L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1372, 69 U.S.P.Q.2d 1996, 1999-2000 (Fed. Cir. 2004).

Deficiencies of Rejection

In the Office Action, the Examiner specifically stated: "As to the new amendment, 'and subsequently return the heat to the welding implement', requires clarification, since

applicant does not show how the heat is being returned. Examiner broadly understood that the heat is returned, since the thermal storage member is made of metal. Examiner will prosecute the claimed invention based on the mentioned interpretation.” Office Action mailed on June 26, 2006, page 3.

The Applicant respectfully disagrees with the Examiner’s rejection. The Applicant believes that the Examiner is confusing claim breadth with indefiniteness. Again, the specification explains that the thermal storage member takes advantage of the duty cycle to store heat and then return it to the speed channel, for example, thereby cooling the torch head during operation of the torch. See Specification, page 6, lines 4-10. In view of this context, the claim is clearly discernible in compliance with Section 112, Second Paragraph.

For at least these reasons, among others, the Applicant respectfully requests withdrawal of the rejections under Section 112, Second Paragraph.

Rejection Under 35 U.S.C. § 102

In the Office Action, the Examiner rejected claims 1-2, 4, 5, 6-9, 33-34 and 36-43 as anticipated by Anderson (U.S. Patent No. 2,659,796). The Examiner also rejected claims 45 and 46 as anticipated by Rehrig (U.S. Patent No. 4,354,088). Applicant respectfully traverses these rejections.

Legal Precedent

Anticipation under section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under section 102, a single reference must teach each and every limitation of the

rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). Accordingly, Applicant needs only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter. The prior art reference also must show the identical invention “in as complete detail as contained in the ... claim” to support a prima facie case of anticipation. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989).

Claim 1 and its Dependent Claims

The Anderson reference is deficient for a number of reasons. For instance, the cited reference does not teach or suggest “a thermal storage member adapted to absorb heat from the torch head; a first electrical insulator disposed along an interior of the thermal storage member; and a second electrical insulator disposed completely around an exterior of the thermal storage member.”

As agreed during the interview summarized above, the Anderson reference fails to teach or suggest these claim features. For example, the Anderson reference teaches a gas nozzle 4 with exposed radiating fins 24, 25, and 26 (i.e., not covered). Anderson, FIG. 1; col. 3, ll. 66-69. “The concentric fins [24, 25 and 26] give a large surface area to radiate the heat and prevent overheating of the nozzle.” *Id.* at col. 3, ll. 72-75 (emphasis added). In fact, the radiating fins 24, 25, and 26 must be exposed to the air in order to function for their intended purpose of radiating heat into the air. As a result, a second electrical insulator is not disposed completely around an exterior of the radiating fins 24, 25, and 26. In view of this deficiency, the cited reference cannot anticipate claim 1 or the claims that depend therefrom.

By further example, the Anderson reference fails to teach or suggest “a first electrical insulator disposed along an interior of the thermal storage member,” as recited by claim 1. The interior of the gas nozzle 4 is disposed concentrically about the contact tube

14 and electrode 21. *See* Anderson, FIG. 1, col. 3, ll. 63-75. However, the Anderson reference does not teach or suggest any insulator along the interior of the gas nozzle 4. In view of this additional deficiency, the cited reference cannot anticipate claim 1 or the claims that depend therefrom.

For these reasons, among others, the Applicant respectfully requests withdrawal of the foregoing rejection under 35 U.S.C. § 102.

Claim 33 and its Dependent Claims

The Anderson reference is deficient for a number of reasons. For instance, the cited reference does not teach or suggest a “metallic member disposed about the conductor and electrically isolated from the conductor and the torch head, wherein the metallic member is configured to absorb heat from the conductor; a first dielectric material disposed between the metallic member and conductor; and a second dielectric material disposed about the torch head, the metallic member, and the conductor, wherein the second dielectric material extends along the entire length of the metallic member.”

Again, as agreed during the interview summarized above, the Anderson reference fails to teach or suggest these claim features. For example, the Anderson reference teaches a gas nozzle 4 with exposed radiating fins 24, 25, and 26 (i.e., not covered). Anderson, FIG. 1; col. 3, ll. 66-69. “The concentric fins [24, 25 and 26] give a large surface area to radiate the heat and prevent overheating of the nozzle.” *Id.* at col. 3, ll. 72-75 (emphasis added). In fact, the radiating fins 24, 25, and 26 must be exposed to the air in order to function for their intended purpose of radiating heat into the air. As a result, a second dielectric material does not extend along the entire length of the nozzle 4, nor does a second dielectric material extend around any portion of the radiating fins 24, 25, and 26. In view of this deficiency, the cited reference cannot anticipate claim 33 or the claims that depend therefrom.

By further example, the Anderson reference fails to teach or suggest “a first dielectric material disposed between the metallic member and conductor,” as recited by claim 33. The interior of the gas nozzle 4 is disposed concentrically about the contact tube 14 and the electrode 21. *See* Anderson, FIG. 1, col. 3, ll. 63-75. However, the Anderson reference does not teach or suggest any dielectric material disposed between the gas nozzle 4 and the contact tube 14 and/or electrode 21. Moreover, the Anderson reference does not teach or suggest any dielectric material disposed between the gas nozzle 4 and the radiating fins 24, 25, and 26. In view of this additional deficiency, the cited reference cannot anticipate claim 33 or the claims that depend therefrom.

For these reasons, among others, the Applicant respectfully requests withdrawal of the foregoing rejection under 35 U.S.C. § 102.

Claim 45 and its Dependent Claims

The Rehrig reference is deficient for a number of reasons. For instance, the cited reference does not teach or suggest a “conductor extending from the torch head, wherein the conductor is configured to enable passage of a gas; a thermal storage member disposed proximate the conductor and configured to absorb heat from the conductor; and a protective cover substantially enveloping the thermal storage member, wherein the protective cover comprises a first electrical insulator; and a second electrical insulator disposed between the thermal storage member and the conductor.”

Again, as agreed during the interview summarized above, the Rehrig reference fails to teach or suggest these claim features. In the Office Action, the Examiner equated the tungsten electrode 18 with the conductor recited in the claim. *See* Office Action mailed on June 26, 2006, page 4. However, as amended, the claim recites that “the conductor is configured to enable passage of a gas.” Referring to FIG. 1 of the Rehrig reference, the tungsten electrode 18 is clearly a solid electrode 18 that is incapable of

passing a gas. Therefore, the Examiner's rejection cannot support a *prima facie* case of anticipation of independent claim 45 and its dependent claims.

In addition, the Examiner equated the claimed thermal storage member with the collet 22 and collet body 28. *See* Office Action mailed on June 26, 2006, page 4. However, as amended, the claim recites "a second electrical insulator disposed between the thermal storage member and the conductor." Clearly, the Rehrig reference does not include any sort of insulator between the tungsten electrode 18 and the collet 22 and collet body 28. Therefore, the Examiner's rejection cannot support a *prima facie* case of anticipation of independent claim 45 and its dependent claims.

For these reasons, among others, the Applicant respectfully requests withdrawal of the foregoing rejection under 35 U.S.C. § 102.

Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 10 and 44 as obvious over Anderson in view of Rehrig. As set forth above, the Applicant hereby cancels claims 10 and 44. However, at least some of the remaining claims recite the same or similar language as previously recited in these claims. Therefore, the Applicant respectfully traverses this rejection due to the lack of a reason to combine the references and the clear teaching away.

Legal Precedent and Guidelines

First, the pending claims must be given an interpretation that is reasonable and consistent with the *specification*. *See In re Prater*, 415 F.2d 1393, 1404-05, 162 U.S.P.Q. 541, 550-51 (C.C.P.A. 1969) (emphasis added); *see also In re Morris*, 127 F.3d 1048, 1054-55, 44 U.S.P.Q.2d 1023, 1027-28 (Fed. Cir. 1997); *see also* M.P.E.P. §§ 608.01(o) and 2111. Indeed, the specification is "the primary basis for construing the claims." *See Phillips v. AWH Corp.*, No. 03-1269, -1286, at 13-16 (Fed. Cir. July 12, 2005) (*en banc*).

One should rely *heavily* on the written description for guidance as to the meaning of the claims. *See id.*

Second, interpretation of the claims must also be consistent with the interpretation that *one of ordinary skill in the art* would reach. *See In re Cortright*, 165 F.3d 1353, 1359, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999); M.P.E.P. § 2111. “The inquiry into how a person of ordinary skill in the art understands a claim term provides an objective baseline from which to begin claim interpretation.” *See Collegenet, Inc. v. ApplyYourself, Inc.*, No. 04-1202, -1222, 1251, at 8-9 (Fed. Cir. August 2, 2005) (quoting *Phillips*, No. 03-1269, -1286, at 16). The Federal Circuit has made clear that derivation of a claim term must be based on “usage in the ordinary and accustomed meaning of the words amongst artisans of ordinary skill in the relevant art.” *See id.*

Third, the burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d. 1430 (Fed. Cir. 1990). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). The Examiner must provide objective evidence, rather than subjective belief and unknown authority, of the requisite motivation or suggestion to combine or modify the cited references. *In re Lee*, 61 U.S.P.Q.2d. 1430 (Fed. Cir. 2002). Moreover, a statement that the proposed modification would have been “well within the

ordinary skill of the art” based on individual knowledge of the claimed elements cannot be relied upon to establish a *prima facie* case of obviousness without some *objective reason to combine* the teachings of the references. *Ex parte Levengood*, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993); *In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000); *Al-Site Corp. v. VSI Int’l Inc.*, 174 F.3d 1308, 50 U.S.P.Q.2d 1161 (Fed. Cir. 1999).

Fourth, when prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). The Federal Circuit has warned that the Examiner must not, “fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.” *In re Dembiczak*, F.3d 994, 999, 50 U.S.P.Q.2d 52 (Fed. Cir. 1999) (quoting *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983)).

Fifth, it is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983); M.P.E.P. § 2145. Moreover, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (CCPA 1959); see M.P.E.P. § 2143.01(VI). If the proposed modification or combination would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no

suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984); *see* M.P.E.P. § 2143.01(V).

Improper Combination - Lack of Objective Evidence of Reasons to Modify/Combine

The Examiner has not shown the requisite motivation or suggestion to modify or combine the cited references to reach the present claims. The Examiner must provide objective evidence, rather than subjective belief and unknown authority, of the requisite motivation or suggestion to combine or modify the cited references. *In re Lee*, 61 U.S.P.Q.2d. 1430 (Fed. Cir. 2002). In the present rejection, the Examiner combined the cited references based on the *conclusory and subjective statement* that it would have been obvious “to one of ordinary skill in the art at the time applicant’s invention was made to fully encased the thermal storage member in order to prevent burning to the users.” Office Action mailed on June 26, 2006, page 5. The Applicant stresses that this reasoning is unsupported and inconsistent with the clear teaching of Anderson, which requires exposure of the nozzle 4 and its fins 24, 25, and 26 to radiate heat into the air. Accordingly, Applicant respectfully requests the Examiner to produce *objective evidence* of the requisite motivation or suggestion to combine the cited references, or remove the foregoing rejection under 35 U.S.C. § 103.

Improper Combination – Reference Teaches Away From Proposed Combination/Modification

In addition to the complete lack of objective evidence, the Applicant stresses that the Anderson reference teaches away from completely covering the gas nozzle 4 and fins 24, 25, and 26, thereby making the Examiner’s proposed combination/modification improper. *See In re Grasselli*, 713 F.2d 731 at 743. As discussed above, the Anderson reference teaches a gas nozzle 4 with exposed radiating fins 24, 25, and 26 (i.e., not covered). Anderson, FIG. 1; col. 3, ll. 66-69. “The concentric fins [24, 25 and 26] give a large surface area to radiate the heat and prevent overheating of the nozzle.” *Id.* at col. 3, ll. 72-75 (emphasis added). In fact, the radiating fins 24, 25, and 26 must be exposed to

the air in order to function for their intended purpose of radiating heat into the air. For at least this reason, among others, the proposed combination/modification is improper and must be withdrawn.

New Claims

As noted above, the Applicant hereby adds new claims 47-58, including new independent claims 51 and 56. These claims recite a number of features that are missing from the cited references, taken alone or in hypothetical combination with one another.

With regard to new independent claim 51, the claim recites “a torch head configured to conduct electricity according to a duty cycle; and a thermal storage member configured to take advantage of the duty cycle to cool the torch head during operation of the welding implement, wherein the thermal storage member is configured to store heat transferred from the torch head to the thermal storage member during an on state of the duty cycle, and the thermal storage member is configured to release heat stored during the on state back to the welding implement for heat dissipation during an off state of the duty cycle.” The Applicant submits that this claim language is clearly supported by the original specification, for example, on page 6, lines 4-10. Moreover, the cited references do not even mention taking advantage of the duty cycle for the purpose of cooling, much less storing heat during an on state and releasing heat during an off state of the duty cycle. Therefore, new independent claim 51 and its dependent claims are believed to be in condition for allowance.

With regard to new independent claim 56, the claim recites similar features as new independent claim 51 plus several other unique features. Therefore, independent claim 56 is believed to be in condition for allowance for the same reasons as claim 51 in addition to the following reasons. For example, independent claim 56 recites “a heat dam disposed adjacent the torch head, wherein the heat dam is configured to absorb heat from the torch head and to transfer the heat to the conductor.” The Applicant submits that this

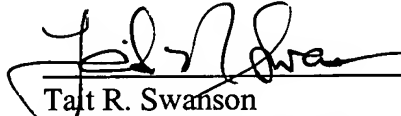
claim language is clearly supported by the original specification, for example, on page 5, line 21 – page 6, line 2. Moreover, the cited references do not even mention a heat dam as set forth in claim 56. Therefore, new independent claim 56 and its dependent claims are believed to be in condition for allowance.

Conclusion

Applicant respectfully submits that all pending claims should be in condition for allowance. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve any other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

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